

KOSNOVSKY, Zdenek; SYMONA, Karel

Internal chills for steel castings. Slavarenstvi 12 no.9:344-348 S '64.

1. Vlkovicke zelezarny Klementa Gottwalda National Enterprise, Ostrava.

SYKORA, Karel, inz.; TUSL, Jan, inz.

Gas tightness of digestion tank constructions. Vod hosp 15 no.1:  
15-16 '65.

1. Regional Water Resources Development and Investment Center,  
Plzen.

SYKORA, L; URBANEK, L.

Geologic conditions in the south and southeastern part of the Most area.

P. 116, (Vestnik) Vol. 32, no. 2, 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

L 31065-66 EWP(c)/EWP(k)/EWP(h)/T/EWP(l)/EWP(f)/EWP(v)  
ACC NR: AP6022547 SOURCE CODE: CZ/0031/66/014/002/0114/0120  
AUTHOR: Borik, Vaclay--Borzhik, V. (Engineer); Sykora, Lubomir (Engineer) 28  
ORG: VZKG, n.p., Ostrava B  
TITLE: Progressive technique in the production of heavy workpieces 14  
SOURCE: Strojirenska vyroba, v. 14, no. 2, 1966, 114-120  
TOPIC TAGS: production engineering, fabricated structural metal  
ABSTRACT: The article describes in its main features a new progressive technique for the single-item production of components of a slabbing mill at the VZKG, where the technique has also proved itself in other heavy production. Orig. art. has: 9 figures. [JPRS]  
SUB CODE: 13 / SUBM DATE: none/ ORIG REF: 004/

Card 1/1 CC

UDC: 621.944.3-412  
621.9:621.81:183.2

0915

0556

SYKORA, Ladislav

Vojtech Ambroz; obituary. Cas min geol 7 no.3:368-370 '62.

COUNTRY : Czechoslovakia  
CATEGORY :

H-5

ARS. JOUR. : RZKhiz., No. 5 1960, No.

18309

AUTHOR : Zvejska, M., Sykora, M., and Ryska, A.  
INST. : Not given

TITLE : Study on the Treatment of Sewage in a Socialist City

ORIG. PUB. : Vodni Hospod, No 7, 293-297 (1959)

ABSTRACT : The authors have studied the operation of the biochemical sewage treatment plant (trickling filters, methane tank) in Ostrava-Stalingrad which processes only municipal sewage. Data are given on the fluctuation in the discharge, chemical composition (dry residue, BOD, total oxygen demand, pH, alkalinity, total N, Cl<sup>-</sup>), and bacterial pollution of the sewage in the course of a typical day. The operation of the treatment plant is described.  
M. Lapshin

CARD: 1/1

223

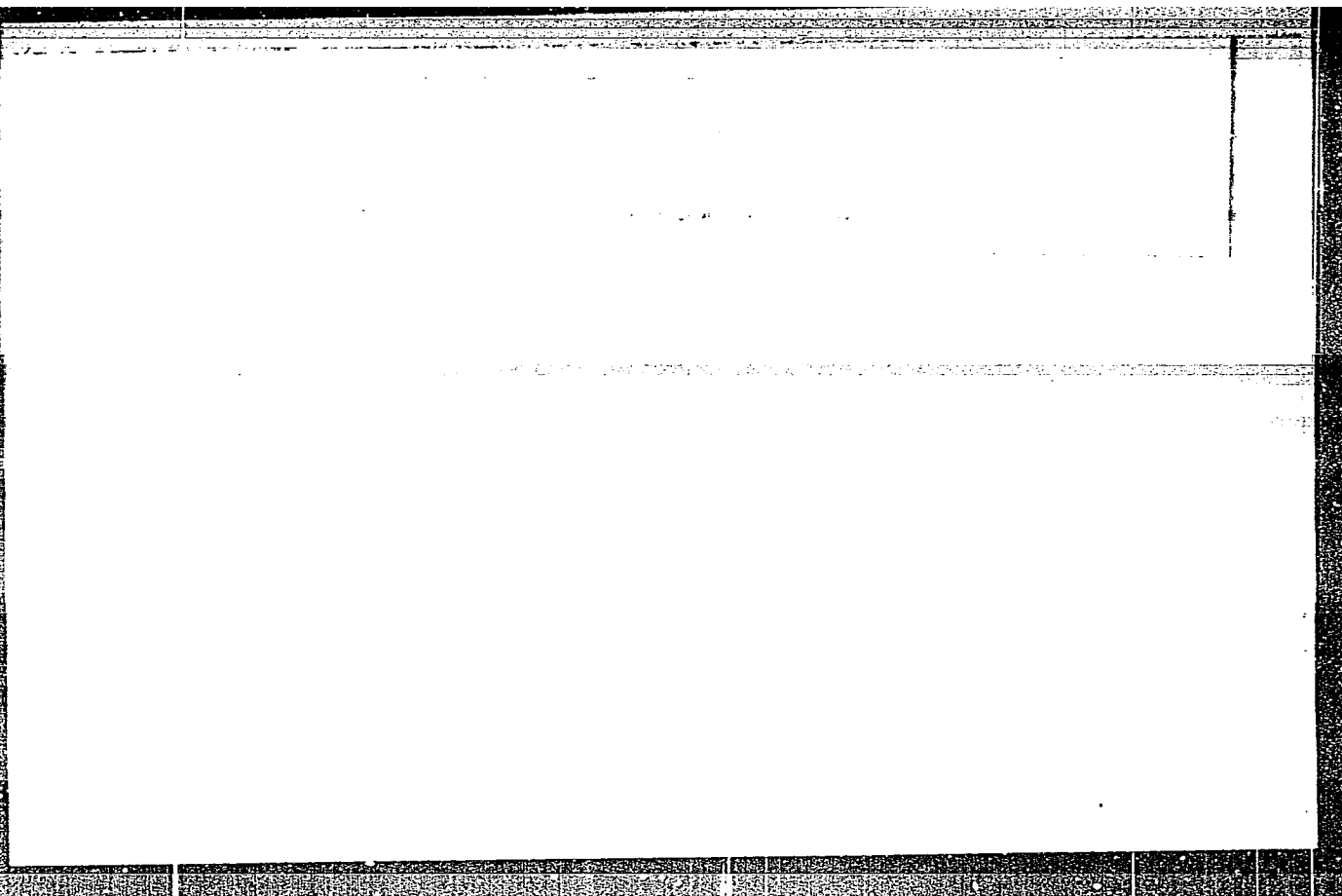
SYKORA, Miroslav, inz.

Development of tractor gearboxes. Zemedel tech 10 no.1:  
57-64 Ja '64.

1. Ceskoslovensko-polske stredisko pro vyzkum a vyvoj traktoru  
pri Zavodech na byrobu kulickovych lozisek, Brno.

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SYKORA, M.

"Decarbonization of steel surfaces. " p. 34, (HUTNIK, Vol. 3, no. 2, Feb 1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 2, No. 11, Nov. 1953, Uncl.

SYKORA, M.

"Introducing Soviet Standards in Czechoslovak Metallurgy" p. 74, (HUTNIK, Vol. 3, no. 4, Apr. 1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 2, No. 11, Nov. 1953, Uncl.

SYKORA, M.

"Good Example of Workers in the Trinec Ironworks" p. 76, (HUTNIK, Vol. 3, no. 4, Apr. 1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 2, No. 11, Nov. 1953, Uncl.

SYKORA, M.

"Oil Pipes. p.112." HUELNIK, Vol. 3, No.5, May 1953. CZECHOSLOVAKIA.

SO: Monthly List of East European Accessions, L.C.Vol. 2, No.11, Nov. 1953  
Uncl.

SYKORA, M.

"Thin sheet metals; forms for heating rolls." p. 125. (Hutník Vol. 3, no. 6, June 1953. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, Feb. 1954,  
Uncl.

Journal of the Iron and Steel Institute  
Vol. 176 Part 3  
Mar. 1954  
Fuel-Preparation, Properties, and Uses

① Met  
The Economics of Fuel in Iron Making. M. Sýkora.  
(*Hutník* (Prague), 1953, 8, (7-8), 185-187). [In Czech]. The  
utilization and calorific value of solid and gaseous fuels in-  
volved in iron-making are discussed.—P. r.

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SYKORA, M.

"Soviet Standards for Metallurgical Production," Metallurgie und Giesserei  
Technik, No 1, Berlin, Jan 1954

Translation W-31216, 29 Mar 55



SYKORA, M.

SYKORA, M. Unification of standards for metallurgic products. p. 26.

Vol. 3, no. 2, Feb. 1954

NORMALIS/CE

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

SYKORA, M.

Unification of standards and division of rolling programs for metallurgic products. p. 50.

NORMALISACE. Praha. Vol. 3, no. 3, Mar. 1954

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

Sykora, M.

Steel molds. p. 257. NORMALISACE. (Urad pro normalisaci) Praha.  
Vol. 3, no. 12, Dec. 1954.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

SYKORA, M. - Normalisace - Vol. 4, no. 1, Jan. 1955.

Standardization of hot-rolled metallurgic steel products. p. 8.  
Permanent quality and exemptions from Czechoslovak state standards. p. 10.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955  
Uncl.

SYKORA, M.

SYKORA, M. Steel forgings. p. 81.

Vol. 4, no. 4, April 1955  
NORMALISACE  
TECHNOLOGY  
Praha, Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

SYKORA, M.

Standardization of the quality of metallurgic products. p. 203.

Vol. 4, no. 9, Sept. 1955  
NORMALISACE  
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

SIKORA, M.

Tempering cold-rolled strip steel. p.45.  
(HUTNIK vol. 5, no. 2, Feb. 1955, Praha)

SO: Monthly List of East European Accessions, (EEAL). LC, Vol. 4, No. 11,  
Nov. 1955, Uncl.

CZECHOSLOVAKIA / Chemical Technology, Chemical Products and  
their Applications. Treatment of Solid Fuels

H-22

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37451

Author : Shongut S., Sykora, M.

Inst : Not given

Title : Ethylene Preparation by Pyrolysis of Tars Resulting  
from Semi-Coking

Orig Pub : Chem. Prumysl, 1957, 7, #11, 581-587.

Abstract : Laboratory experiments on pyrolysis of 15 varieties of  
tars and for the comparison of heavy oil residues were  
conducted. Their object was a search for possibilities of  
production of unsaturated, gaseous hydrocarbons by pyrolysis  
of tars and analogous products, obtained by a high  
pressure hydrolysis of semi-coking tars from North

Card 1/2

5



SYKORA, M.; HANULIK, J., inz.

Junction rail bonds on the line section at the foot of a hill.  
Zel dop tech 12 no.11:288-289 '64.

SYKORA, O.; BENDA, F.

Sudden blindness in an infant. Cesk. pediat. 13 no.9:819-822 5 Oct 58.

1. Detske oddeleni OUNZ v Ceske Lipe, prednosta primar dr. K. Vlasak  
Ocni oddeleni OUNZ v Ceske Lipe, prednosta dr. Frant. Benda O. S.  
Dobrichovice, Anglicka 319.

(BLINDNESS, in inf. & child

sudden blindness caused by bilateral inflamm. of optic  
tract, case report (Cz))

(OPTIC TRACTS, dis.

bilateral inflamm. causing sudden blindness in inf., case  
report (Cz))

L 20237-66 EEG(k)-2

ACC NR: AP6010347

SOURCE CODE: CZ/0039/65/026/011/0650/0657

AUTHOR: Stach, Jan; Sykora, Rudolf

ORG: TESLA Roznov, n.p., Roznov

TITLE: Some methods of field measurements of transistors *gm*

SOURCE: Slaboproudý obzor, v. 26, no. 11, 1965, 650-657

TOPIC TAGS: transistor, electric impedance, electric capacitance

ABSTRACT: The article describes simple methods of measuring four radio-frequency parameters with which the r-f properties of transistors may be characterized for general applications: the real part of the short-circuit impedance  $Re h_{11e}$ , the absolute value of the short-circuit current gain factor  $h_{21e}$ , the absolute value of the inverse voltage ratio  $h_{12b}$ , and the output capacitance in the common base circuit c22b. Orig. art. has: 13 figures and 28 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: 26Apr65 / ORIG REF: 003 / OTH REF: 003

Card 1/1 *17/45*

UDC: 621.314.7.001.4

CZECHOSLOVAKIA

SYKORA, S

Research Institute for Rubber and Plastics Technology,  
Gottwaldov

Prague, Collection of Czechoslovak Chemical Communications,  
No 7, July 1966, pp 2664-2678

"Mixing of highly viscous liquids."

GABERMANN, V.; SYKORA, R.

Adaptation of a high pressure mercury ultraviolet lamp for a study  
of chromatograms. Biokhimiia 27 no.3:426-429 My-Je '62.  
(MIRA 15:8)

1. Chair of Medical Chemistry, Medical Institute of the Carl  
University, Plzen, Czechoslovakia.  
(CHROMATOGRAPHIC ANALYSIS) (ULTRAVIOLET RAYS)

SYKORA, R.

Modification of the Schering bridge for measurement on higher  
frequencies. Sdel tech 12 no.7:261 J1 '64

SYKORA, Rudolf

New method of protection of a stabilized transistor power supply.  
Sdel tech 12 no.8:308 Ag '64

A simple constant current source. Ibid.:310-311

1-1813-65

MISSION NR: 1-1813-65

07-0014-64/000/008/0308/0308

AUTHOR: Sykora, Rudolf

116

TITLE: New method of securing a stabilized transistorized power supply

SOURCE: Sdelovaci technika, no. 8, 1964, 308

TOPIC TAGS: transistor, electronic feedback, electric power production

ABSTRACT: Described is Czechoslovak Patent 17 550-61, which uses a feedback loop to stabilize the output of a transistorized power supply. The loop consists of a transistor, a diode, and a resistor, which are connected in a feedback configuration. The output of the power supply is fed back to the base of the transistor, which controls the current through the diode and resistor, thereby stabilizing the output voltage.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: HC, EE

NO REF SOV: 000

OTHER: 002

JPRS

Card 1/1



CZECHOSLOVAKIA

NAVRATIL, B; SYKORA, S; KARASEK, O

Research Institute of Rubber and Plastics Technology,  
Gottwaldov - (for all)

Prague, Collection of Czechoslovak Chemical Communi-  
cations, No 2, February 1967, pp 517-525

"Laminar-flow heat transfer in the annular space of a  
mixed reactor."

SYKORA S.

500

Continuous measurement of the density of liquids. I.  
[1] Vitovec and S. Sykora (Výzkumný ústav synt. kaučuku,  
Přelstwald, Czech.). Chem. Listy 50, 140-3 (1956).  
An app. based on the changes of hydrostatic pressure is  
described. B. Rrida-ee

Smol ①  
Sykora

SYKORA, S.

Heating of multiple-ply and shaped rubber sheets during the  
vulcanization process. Kauch.i rez. 22 no.1:24-26 Ja '63.  
(MIRA 16:6)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka,  
g. Gotval'dov, Chekhoslovatskaya Sotsialisticheskaya Respublika.  
(Vulcanization) (Heat--Transmission)

SYKORA, Stanislav; KOLARIK, Zdenek

Sorption of radioactive isotopes on precipitator. Pt. 12.  
Jaderna energie 10 no. 2:52 F '64.

1. Ustav jaderného výzkumu, Československá akademie věd,  
Rez.

SYKORA, T.

"Unimog"; a German truck. p.23.  
(Silnice, Vol. 6, No. 1, Jan. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

SYKORA, T.

A hydraulic conveyer for a stone crusher; an improved design by Sommer. p.23.  
(Silnice, Vol. 6, No. 2, Feb. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

CA SIKORA, Vaclav

*Inorganic Chemistry*

The question of existence of ternary uranyl beryllium sodium acetate. Václav Hovorka and Václav Sýkora (Tech. Univ., Prague, Czech.). *Chem. Listy* 80, 3-8 (1982).—Be(OAc)<sub>2</sub> accelerates pptn. of NaUO<sub>2</sub>(OAc)<sub>2</sub> from the solns. of UO<sub>2</sub>(OAc)<sub>2</sub> and NaCl. In contrast to Mg, Cd, Zn, Mn, Co, and Ni, Be does not form a ternary acetate, as was proved by means of chem. and x-ray analysis.  
M. Hudlický

~~SECRET~~ SYCORA, Vaclav  
CZECHOSLOVAKIA/General Problems - Methodology. Scientific A-1  
Institutions and Conferences. Instruction. Questions  
Concerning Bibliography and Scientific Documentation.

Abs Jour : Referat Zhur - Khimiya, No 8, 1957, 25683 K.

Author : Vaclav Sycora, Vladimir Zatka.

Inst :

Title : Chemist's Reference Tables.

Orig Pub : Praha, SNTL, 1956, 202, (2) s., 11., 13.50 Kcs.

Abstract : No abstract.

Card 1/1

- 40 -



SYKORA, V.; DUBSKY, F.

Selective ion exchangers on the basis of resorcyaldehyde. Pt.

2. Coll Cz Chem 28 no.8:2149-2157 Ag '63.

1. Institut fur analytische Chemie, Technische Hochschule fur Chemie, Prag.

CZECHOSLOVAKIA/Cultivated Plants - Grains.

M.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44039

Author : Sykora, Jan., Sykora, Vladimir

Inst : -

Title : Selection of Wheat by the Method of Free Pollination.

Orig Pub : Za vysokou urodu, 1957, 5, No 3, 183-184

Abstract : No abstract.

Card 1/1

- 24 -

SYKORA, Vaclav, doc., inz.dr.; MATOUS, Jan, inz.; DUBSKY, Fanta, inz.  
SOUKUP, Jiri, inz., CSc.

Use of synthetic ion exchangers as plant nutrient sorbents. Part 2.  
Rost vyroba 9 no.11:1235-1246 N '63.

1. Vysoka skola chemicko-technologicka, katedra analyticke  
chemie, Praha; Vyzkumny ustav okrasneho zahradnictvi,  
Pruhonice.

MATOUS, Jan, inz.; SOUKUP, Jiri, inz.; SYKORA, Vaclav, doc. dr.;  
DUBSKY, Ferdinand, inz.

Uptake of plant nutrients sorbed on ion exchangers under  
the conditions of separated nutrition. Rost výroba 11  
no.1:93-100 Ja '65.

1. Research Institute of Ornamental Gardening, Pruhonice  
(for Matous and Soukup). 2. Chair of Analytical Chemistry  
of the Higher School of Chemical Technology, Prague 6,  
Technicka 5 (for Sykora and Dubsky). Submitted June 1, 1964.

1st and 2nd copies

3rd and 4th copies

PROCESSING AND PROPERTIES INDEX

BC

4-1

**Leadin-p-oxime, a new reagent for certain metals.** V. MOVCHAN and V. SYKURA (Coll. Czech. Chem. Commun., 1968, 10, 82-83).--Insol. compounds of the oxime and metal, formed on adding the former to solutions of Ag, Hg<sup>2+</sup>, Hg<sup>2+</sup>, Fe, Cu<sup>2+</sup>, Cu<sup>2+</sup>, Fe<sup>2+</sup>, Co, Ni, and UO<sub>2</sub>, salts in presence of excess of NaOAc, have been examined and are described. Th salts form a sol. stable complex compound. C. R. H.

SEM-51A METALLURGICAL LITERATURE CLASSIFICATION

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BC

a-1

Determination of uranium by isatin- $\beta$ -oxime.  
V. HOVORKA and V. SYKORA (Coll. Czech. Chem.  
Comm., 1938, 10, 182-189).—Addition of isatin- $\beta$ -  
oxime to a hot solution of a uranyl salt, followed by  
addition of excess of NaOAc, gives a quant. pptn. of  
 $UO_2(C_8H_5O_2N_2)_2$ , finally converted by ignition into  
 $U_3O_8$ . The method tends to give slightly high results,  
with an error (for wts. of  $U_3O_8$  from 0.3 to 0.01 g.) of  
<0.5%. M. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLE INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLE INDEX

COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX	
<p>1. The preparation of the d-oxime of isatin. V. Hovorka and V. Sýkora. <i>Chem. Listy</i> 22, 211 (1928); <i>J. C. A.</i> 33, 4470. Isatin (15 g.) and 8 g. of <math>\text{NH}_4\text{OH} \cdot \text{HCl}</math> (1 mol.) were poured into a vessel contg. 200 cc. <math>\text{H}_2\text{O}</math>, brought to a boil and heated mildly for 15 min. or until all of the red isatin formed the yellow oxime. The soln. was cooled and the ppt. filtered, dried and recrystd. from 70% EtOH. Any interruption in the crystn. led to the formation of a pale yellow powder; a continuous crystn. yielded golden yellow needles m. <math>214^\circ</math> and decomp. <math>217^\circ</math>. Although the yield ranged from 80 to 85% further fractions from the evapd. mother liquor increased this yield. The reaction was hastened by the presence of 1 mol. of <math>\text{HCO}_2\text{Na}</math>, <math>\text{AcONa}</math> or <math>\text{Na}_2\text{HPO}_4</math>, or 0.5 mol. of <math>\text{Na}_2\text{CO}_3</math> or <math>\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}</math>, but heat was necessary to complete the reaction. The reaction was faster in an alk. than in an acid medium. <math>\text{Na}_2\text{HPO}_4</math> produced the fastest reaction. <math>\text{Na}_2\text{CO}_3</math> the most violent one and <math>\text{Na}_2\text{B}_4\text{O}_7</math> produced some free acid which reduced the yield to 70%. With the exception of <math>\text{Na}_2\text{HPO}_4</math> all of the salts produced an amorphous product. However, the best results were obtained without the addn. of salts and required a total time of 1-1.5 hrs. P. M.</p>		<p>2. The preparation of the d-oxime of isatin. V. Hovorka and V. Sýkora. <i>Chem. Listy</i> 22, 211 (1928); <i>J. C. A.</i> 33, 4470. Isatin (15 g.) and 8 g. of <math>\text{NH}_4\text{OH} \cdot \text{HCl}</math> (1 mol.) were poured into a vessel contg. 200 cc. <math>\text{H}_2\text{O}</math>, brought to a boil and heated mildly for 15 min. or until all of the red isatin formed the yellow oxime. The soln. was cooled and the ppt. filtered, dried and recrystd. from 70% EtOH. Any interruption in the crystn. led to the formation of a pale yellow powder; a continuous crystn. yielded golden yellow needles m. <math>214^\circ</math> and decomp. <math>217^\circ</math>. Although the yield ranged from 80 to 85% further fractions from the evapd. mother liquor increased this yield. The reaction was hastened by the presence of 1 mol. of <math>\text{HCO}_2\text{Na}</math>, <math>\text{AcONa}</math> or <math>\text{Na}_2\text{HPO}_4</math>, or 0.5 mol. of <math>\text{Na}_2\text{CO}_3</math> or <math>\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}</math>, but heat was necessary to complete the reaction. The reaction was faster in an alk. than in an acid medium. <math>\text{Na}_2\text{HPO}_4</math> produced the fastest reaction. <math>\text{Na}_2\text{CO}_3</math> the most violent one and <math>\text{Na}_2\text{B}_4\text{O}_7</math> produced some free acid which reduced the yield to 70%. With the exception of <math>\text{Na}_2\text{HPO}_4</math> all of the salts produced an amorphous product. However, the best results were obtained without the addn. of salts and required a total time of 1-1.5 hrs. P. M.</p>	
<p>3. The preparation of the d-oxime of isatin. V. Hovorka and V. Sýkora. <i>Chem. Listy</i> 22, 211 (1928); <i>J. C. A.</i> 33, 4470. Isatin (15 g.) and 8 g. of <math>\text{NH}_4\text{OH} \cdot \text{HCl}</math> (1 mol.) were poured into a vessel contg. 200 cc. <math>\text{H}_2\text{O}</math>, brought to a boil and heated mildly for 15 min. or until all of the red isatin formed the yellow oxime. The soln. was cooled and the ppt. filtered, dried and recrystd. from 70% EtOH. Any interruption in the crystn. led to the formation of a pale yellow powder; a continuous crystn. yielded golden yellow needles m. <math>214^\circ</math> and decomp. <math>217^\circ</math>. Although the yield ranged from 80 to 85% further fractions from the evapd. mother liquor increased this yield. The reaction was hastened by the presence of 1 mol. of <math>\text{HCO}_2\text{Na}</math>, <math>\text{AcONa}</math> or <math>\text{Na}_2\text{HPO}_4</math>, or 0.5 mol. of <math>\text{Na}_2\text{CO}_3</math> or <math>\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}</math>, but heat was necessary to complete the reaction. The reaction was faster in an alk. than in an acid medium. <math>\text{Na}_2\text{HPO}_4</math> produced the fastest reaction. <math>\text{Na}_2\text{CO}_3</math> the most violent one and <math>\text{Na}_2\text{B}_4\text{O}_7</math> produced some free acid which reduced the yield to 70%. With the exception of <math>\text{Na}_2\text{HPO}_4</math> all of the salts produced an amorphous product. However, the best results were obtained without the addn. of salts and required a total time of 1-1.5 hrs. P. M.</p>		<p>4. The preparation of the d-oxime of isatin. V. Hovorka and V. Sýkora. <i>Chem. Listy</i> 22, 211 (1928); <i>J. C. A.</i> 33, 4470. Isatin (15 g.) and 8 g. of <math>\text{NH}_4\text{OH} \cdot \text{HCl}</math> (1 mol.) were poured into a vessel contg. 200 cc. <math>\text{H}_2\text{O}</math>, brought to a boil and heated mildly for 15 min. or until all of the red isatin formed the yellow oxime. The soln. was cooled and the ppt. filtered, dried and recrystd. from 70% EtOH. Any interruption in the crystn. led to the formation of a pale yellow powder; a continuous crystn. yielded golden yellow needles m. <math>214^\circ</math> and decomp. <math>217^\circ</math>. Although the yield ranged from 80 to 85% further fractions from the evapd. mother liquor increased this yield. The reaction was hastened by the presence of 1 mol. of <math>\text{HCO}_2\text{Na}</math>, <math>\text{AcONa}</math> or <math>\text{Na}_2\text{HPO}_4</math>, or 0.5 mol. of <math>\text{Na}_2\text{CO}_3</math> or <math>\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}</math>, but heat was necessary to complete the reaction. The reaction was faster in an alk. than in an acid medium. <math>\text{Na}_2\text{HPO}_4</math> produced the fastest reaction. <math>\text{Na}_2\text{CO}_3</math> the most violent one and <math>\text{Na}_2\text{B}_4\text{O}_7</math> produced some free acid which reduced the yield to 70%. With the exception of <math>\text{Na}_2\text{HPO}_4</math> all of the salts produced an amorphous product. However, the best results were obtained without the addn. of salts and required a total time of 1-1.5 hrs. P. M.</p>	

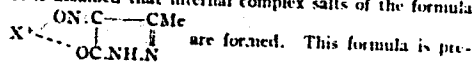
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
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<p>Oximino-N-phenyl-3-methylpyrazolone as a reagent in analytical chemistry. V. HOVONKA and V. SVETKA (Coll. Czech. Chem. Comm., 1939, 11, 70—76).—Characteristic reactions of an aq. EtOH solution of the reagent with solutions containing Ag<sup>+</sup>, Hg<sub>2</sub><sup>2+</sup>, Hg<sup>2+</sup>, Pb<sup>2+</sup>, Cu<sup>2+</sup>, Bi<sup>3+</sup>, Cd<sup>2+</sup>, Fe<sup>3+</sup>, Fe<sup>2+</sup>, Mn<sup>2+</sup>, Ni<sup>2+</sup>, UO<sub>2</sub><sup>2+</sup>, or Zn<sup>2+</sup> are described. Salts of the composition M(C<sub>10</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>)<sub>2</sub>, where M = Cu, Zn, Mn, or UO<sub>2</sub>, have been isolated. E. S. H.</p>																																																			
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SYKORA, V.

CA

Reactions of Isonitroso-3-methyl-5-pyrazolone with metallic salts. V. Hovorka and V. Sykora. *Collection Czech. Chem. Commun.* 11, 1247 (1946) (in French); cf. *C.A.* 33, 3287. The reaction of isonitroso-3-methyl-5-pyrazolone (I) with metallic salts has been studied. It is assumed that internal complex salts of the formula



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A contribution to the reactions of piperonal oxime with metallic salts. V. Hovoska and V. Sykora. *Chem. Listy* 33, 276-7 (1939); *cf. C. A.* 33, 6307. Piperonal oxime in 80% EtOH and in the presence of the buffers, AcONa or hexamethylenetetramine, did not react with Pb, Cd, Fe, Ni, Co, Mg or Ca added in the form of nitrates, sulfates, chlorides or perchlorates. It reacted with both

Hg<sup>+</sup> and Hg<sup>++</sup> but did not form ppt. with them even in carefully buffered solns. With U salts it changed color from a yellow to a brown-orange, indicating the formation of complex salts, but it did not ppt. the U salts even with the aid of buffers. In the presence of AcONa or hexamethylenetetramine it pptd. Cu as a green mass (I) quantitatively. I was very sensitive to the acidity of the medium, could not be weighed directly, had to be ignited to CuO, and was in dil. CH<sub>3</sub>CO and AcOH. Elementary analyses indicate Cu(OH)C<sub>10</sub>H<sub>15</sub>NO<sub>3</sub> or CuO.Cu(C<sub>10</sub>H<sub>15</sub>NO<sub>3</sub>). In detns. made on 0.1-0.5 g. samples the error was 0.33-0.10%, always below the theoretical values. Because I dissolves in dil. AcOH, hexamethylenetetramine is preferable as a reagent for reducing the acidity of the soln. Since heat evaporates the liberated CH<sub>3</sub>O, the pptn. of I became more complete in hot solns. Because the piperonal oxime does not ppt. Cd, it may become useful for sepg. Cd from Cu in quant. analysis. F. Maresch

Formate complexes. H. Hüntzinger, H. Fleck and W. Rudolph. *Z. anorg. allgem. Chem.* 242, 197-200 (1939). Calcn. of the ion wts. of formate ions by detn. of dialysis coeffs. establishes the following formate complexes: [Co(HCOO)<sub>4</sub>]<sup>3-</sup>, [Ni(HCOO)<sub>4</sub>]<sup>2-</sup>, [Zn(HCOO)<sub>4</sub>]<sup>2-</sup>, [Cu(HCOO)<sub>3</sub>]<sup>2-</sup>, [Cd(HCOO)<sub>3</sub>]<sup>2-</sup>, [Cr<sub>2</sub>(OH)<sub>4</sub>]<sup>2+</sup>, [Fe<sub>2</sub>(HCOO)<sub>4</sub>]<sup>2+</sup>.

H. Stoertz

SYKORA, V.

SORM, F.; HOLUB, M.; SYKORA, V.; MLEZIVA, J.; STREIBL, M.; PLIVA, J.;  
SCHNEIDER, B.; HEROUT, V.

On terpenes. Part 46. Sesquiterpenic hydrocarbons from oil of sweet  
flag [in English with summary in Russian]. Sbor. Chekh. khim. rab. 18  
no. 4:512-526 Ag '53. (MLRA 7:6)

1. Department of Natural Products, Institute of Organic Chemistry,  
Czechoslovak Academy of Science, Prague. (Sesquiterpenes)  
(Calamene)

# *S. Kora, Vlastimil Herout*

**Terpenes. I.** Contribution to the elucidation of elemol. Vlastimil Herout, Josef Pivra, and František Šorm (Czech. Akad. Věd, Prague, Czech.). *Chem. Listy* 47, 889-898 (1953); *Collection Czechoslov. Chem. Commun.* 19, 124-34 (1954) (in English); cf. C.A. 47, 8, 34h. — Comparison of the infrared spectra of elemol and of synthetic 1,1-dimethyl-2-sec-butyl-4-isopropylcyclohexane (I) contradicts the Ruzicka-van Veen formula (C.A. 24, 607) of elemol (II). Dehydrogenation of isopropylcyclohexane (III) to 1-methyl-2,4-diisopropylbenzene (IV) proves that I has the skeleton of 1-methyl-1-ethyl-2,4-diisopropylcyclohexane (V). II isolated from the distn. residues of citronella oil by vacuum distn. was chromatographed and purified through its phenylurethane, m. 111-12°, to give pure II, m. 32.5-3.5°. Dehydration of 40 g. tetrahyd- $\alpha$ -II (obtained by hydrogenation of II over PtO<sub>2</sub>) by heating with 220 g. 85% HCO<sub>2</sub>H 1 hr. on the steam bath gave, after chromatography and distn., 31 g. III, b<sub>p</sub> 128-30°. Heating 2.1 g. III and 0.95 g. S 7 hrs. at 180-240° gave 0.95 g. IV, b<sub>p</sub> 100-5°, d<sub>20</sub> 0.8563, n<sub>D</sub><sup>20</sup> 1.4945. Quant. ozonization of II indicated 1.59 double bonds. I was synthesized as follows: refluxing

21 g. 2,2-dimethylcyclohexanone in 210 ml. CCl<sub>4</sub> with 27.2 g. N-bromosuccinimide under ultraviolet illumination 40 min. gave 37 g. 2,2-dimethyl-6-bromocyclohexanone, m. 55.5-7° (from petr. ether); the dehydrobromination of which (35 g.) with 250 ml. collidine gave 11.9 g. 2,2-dimethyl-6-cyclohexenone (VI), b. 175-82° (decompt.). Refluxing 1 hr. 11.9 g. VI with a soln. obtained from 10.7 g. Mg and 31.4 g. iso-PrCl in Et<sub>2</sub>O gave, by way of the semicarbazone, m. 137-8°, 2.22 g. 2,2-dimethyl-6-isopropylcyclohexanone, (VII), b<sub>p</sub> 105-5.5°, d<sub>20</sub> 0.8982, n<sub>D</sub><sup>20</sup> 1.4140. VII (1.03 g.) in petr. ether refluxed 1 hr. with a soln. of sec-BuLi made from 1.5 g. Li and 12 ml. sec-BuCl, gave, after chromatography, 0.6 g. 1-sec-butyl-2,2-dimethyl-5-isopropylcyclohexanol, b<sub>p</sub> 98-9°, the dehydration of which with HCO<sub>2</sub>H yielded 1,1-dimethyl-2-sec-butyl-4-isopropylcyclohexene (VIII), b<sub>p</sub> 105-8°. Hydrogenation of VIII in AcOH over PtO<sub>2</sub> gave I, d<sub>20</sub> 0.8412, n<sub>D</sub><sup>20</sup> 1.4601. Dehydrogenation of VIII with S (7 hrs. at 180-240°) gave a compd. distg. at 27

mm. at bath-temp. 126-31°. 1-Methyl-2-sec-butyl-4-isopropylbenzene (IX) was synthesized as follows: carvone (n<sub>D</sub><sup>20</sup> 1.4990) (2.3 g.) and sec-BuLi (from 2.4 g. Li and 14 g. sec-BuCl) refluxed 1 hr. in petr. ether gave 2.5 g. crude 1-sec-butyl-2-methyl-5-isopropenyl-2-cyclohexenol, b<sub>p</sub> 94-133°, which was aromatized by boiling with HCO<sub>2</sub>H to 0.55 g. 1-methyl-2-sec-butyl-4-isopropylbenzene (X), b<sub>p</sub> 98-105°, d<sub>20</sub> 0.8614, n<sub>D</sub><sup>20</sup> 1.4904. The same compd. was obtained as follows: carvomenthone (3 g.) refluxed 75 min. with sec-BuLi (from 1.5 g. Li and 11 ml. sec-BuCl) in petr. ether yielded, after chromatography, 1-sec-butyl-2-methyl-5-isopropylcyclohexanol, b<sub>p</sub> 87-111°. This heated with 90% HCO<sub>2</sub>H gave 1-sec-butyl-2-methyl-5-isopropylcyclohexenol (I), b<sub>p</sub> 100-15°, which was dehydrogenated with S at 180-250° to 0.93 g. X, b<sub>p</sub> 103-6°, d<sub>20</sub> 0.8627, n<sub>D</sub><sup>20</sup> 1.4926. 1-Methyl-2,4-diisopropylbenzene (XI) was synthesized as follows: carvomenthone (d<sub>20</sub> 0.9124, n<sub>D</sub><sup>20</sup> 1.4564) (3.1 g.), refluxed 60 min. with iso-PrLi, prepd. from 2.8 g. Li and 19 ml. iso-PrCl, gave 3.5 g. 2-methyl-1,5-diisopropylcyclohexanol, b<sub>p</sub> 70-81°. This (2 g.) was dehydrated with HCO<sub>2</sub>H to 1.34 g. of the compd., b<sub>p</sub> 88-90.5° which yielded, by heating 6 hrs. with S at 180-240°, 0.7 g. XI, b<sub>p</sub> 104-8°, d<sub>20</sub> 0.8673, n<sub>D</sub><sup>20</sup> 1.4946. LI. The composition of the chamazulene. Preliminary communication. R. Šorm, J. Novák, and V. Herout. *Chem. Listy* 47, 1017-8 (1953); *Collection Czechoslov. Chem. Commun.* 18, 527-9 (1953) (in English). — On the basis of all known data on the elementary analyses of chamazulene and its derivs., on the basis of oxidation products, and of infrared spectra detcs., the correct formula for chamazulene, 1,4-dimethyl-7-methylulene, C<sub>15</sub>H<sub>14</sub>, is suggested. LI. The structure of laserpitine. František Šorm, Miroslav Hofeb, and Vlastimil Herout. *Chem. Listy* 47, 1493-1503 (1953); *Collection Czechoslov. Chem. Commun.* 19, 135-40 (1954) (in German). — Laserpitine (I), the bitter principle of the root of *Laserpitium latifolium*, is a diester of angic acid and isocrotonol (II) which seems to be a bicyclic tetrahydroxy ketone. Out of the 5 O atoms, 3 are bound to three neighboring C atoms, and 2 to two adjacent C atoms in some other part of the mol. I, isolated by petr. ether extr., m. 117°, [α]<sub>D</sub><sup>20</sup> 11°, mol. wt. (Rast) 445, hydrogenated over PtO<sub>2</sub> in AcOH gave tetrahydrolaserpitine, m. 83-5° (from petr. ether). Sapon. of 2.8 g. I with 6.2 ml. 1.2 N Ba(OMe)<sub>2</sub> in 10 ml. MeOH at room temp. gave,

di-Me norcaryophyllene, b<sub>p</sub> 100-3°, 10 g. di-Me caryophyllene, b<sub>p</sub> 150-1.5°, and 40 g. di-Me homocaryophyllene, b<sub>p</sub> 130-2°, n<sub>D</sub><sup>20</sup> 1.4403, [α]<sub>D</sub><sup>20</sup> 32.00. Refluxing 37.4 g. II 4 hrs. with 10 ml. MeOH and a few drops of H<sub>2</sub>SO<sub>4</sub> gave 12.8 g. (30.6%) Me II homocaryophyllene, b<sub>p</sub> 186° (III). III (3.2 g.) was treated with SOCl<sub>2</sub> in 30 ml. CCl<sub>4</sub>, the solvent evapd. in vacuo, the ester acid chloride dissd. with CCl<sub>4</sub> and added to a benzene soln. of 1.2 equiv. Me<sub>2</sub>CO to give, after heating 10 min., decompn. with 10% H<sub>2</sub>SO<sub>4</sub>, and ether extr., 2.00 g. (83%) Me 3-(2,3-dimethyl-4-acetylcyclobutyl)propionate (IV), b<sub>p</sub> 131-8°; semicarbazone of the free keto acid, m. 106-6°. To 4 g. HgCl<sub>2</sub>-activated Zn in 70 ml. CCl<sub>4</sub> were added 6.5 g. IV and 14 g. BrCH<sub>2</sub>CO<sub>2</sub>Me in 30 ml. CCl<sub>4</sub>, the mixt. boiled 10 min., decompd. with 10% H<sub>2</sub>SO<sub>4</sub> and extrd. with Et<sub>2</sub>O, the residue dehydrated by boiling 2 hrs. with 40 ml. Ac<sub>2</sub>O to give, after chromatography, 2.43 g. Me β-[2-(2-carbomethoxyethyl)-3,3-dimethylcyclobutyl]crotonate, b<sub>p</sub> 116-17°, which hydrogenated over PtO<sub>2</sub> in AcOH gave Me β-[2-(2-carbomethoxyethyl)-3,3-dimethylcyclobutyl]butyrate, 1.18 g., b<sub>p</sub> 151-64°; β-[2-(2-carbomethoxyethyl)-3,3-dimethylcyclobutyl]butyric acid, b<sub>p</sub> 190° (bath temp.) (obtained by alk. sapon. of the ester) (0.65 g.) distd. with 0.65 g. Fe dust and 0.15 g. Ba(OH)<sub>2</sub> gave 260 mg. (54%) 2,8,8-trimethylbicyclo[0.2.2]nonan-4-one (V), b<sub>p</sub> 130° (bath temp.); semicarbazone, m. 176-7°. Another prepn. started with IV (3.53 g.) which was refluxed 5 hrs. with 1.88 g. NCCCH<sub>2</sub>CO<sub>2</sub>Et, 1.2 g. AcOH, 1.2 g. AcONa and 5 ml. CCl<sub>4</sub> to give 2.31 g. (45%) Et α-cyano-β-[2-(2-carbomethoxyethyl)-3,3-dimethylcyclobutyl]crotonate, b<sub>p</sub> 161-8°, which hydrogenated over Pd on CaCO<sub>3</sub> yielded 2.15 g. Et α-cyano-β-[2-(2-carbomethoxyethyl)-3,3-dimethylcyclobutyl]butyrate, b<sub>p</sub> 160-3° (VI). Heating 1.98 g. VI 15 hrs. with 10 ml. HCl and 5 ml. AcOH yielded 1.13 g. (98%) β-[3-(2-carboxyethyl)-3,3-dimethylcyclobutyl]butyric acid, b<sub>p</sub> 180°, which yielded by cyclization 49% V, b<sub>p</sub> 112-14°. The semicarbazone of V (340 g.), 450 ml. Na and 9 ml. EtOH were heated 20 hrs. at 200°, the mixt. dissd. with H<sub>2</sub>O and extrd. with Et<sub>2</sub>O, and the residue after evapn. of the Et<sub>2</sub>O, was chromatographed to yield 105 mg. (41%) I, b<sub>p</sub> 95-105°. I was also obtained by the K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> reduction of the semicarbazone

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VLADIMIR SYKORA, VLASTIMIL  
HEROUT, & others

of II, a 50% yield. I found the 3 isomers of triarylsulfoxide, d<sub>4</sub> 0.8337, and 0.8321, 1.3628; the infrared spectrum of I is given. LIV. The structure of lactarazulene and lactaravignin. Prantšek, Sorm, Včel, Benešová, and Vlastimil Herout. *Ibid.* 1870-81. A new structure for lactarazulene (from *Lactarius deliciosus*) (II), C<sub>11</sub>H<sub>10</sub> was confirmed as 7-isopropenyl-1,4-dimethylazulene by partial hydrogenation, which transformed I to guaiazulene (II). Lactaravignin (III) also belongs to the guaiams (IV) type. Ozonization of I showed the presence of methylene double bond. Hydrogenation of I in EtOH over Pd on C, deactivated with quinoline vapors, gave II, trinitrobenzene compd., m. 151°. III, m. 57.6-8° (from petr. ether-CCl<sub>4</sub>) which showed the presence of 1 CH<sub>3</sub> group, gave, by hydrogenation over PtO<sub>2</sub> in AcOH, IV, C<sub>11</sub>H<sub>12</sub>, d<sub>4</sub> 0.8310, n<sub>D</sub><sup>20</sup> 1.4311, and as aic., C<sub>11</sub>H<sub>12</sub>O, b<sub>p</sub> 180-5° (bath temp.). Partial hydrogenation over deactivated Pd gave dihydrofactorsulfoxide, b<sub>p</sub> 130-6° (bath temp.). Infrared spectra of I and IV are given. LVI. Paper chromatography of azulenes. Otto Knessl and Alice Vlastiborová. *Ibid.* 48, 212-16 (1954). The analysis of triarylsulfoxides is based on different R<sub>F</sub> values obtained by paper chromatography with petr. ether as stationary and 35-70% H<sub>3</sub>PO<sub>4</sub> as mobile phases. The R<sub>F</sub> values with 35, 45, 50, 55, 60, 65, and 70% H<sub>3</sub>PO<sub>4</sub>, resp., are listed for *S*-guaiazulene (0.0, 0.08, 0.30, 0.43, 0.58, 0.87, 1.0), *reticazulene* (0.0, 0.02, 0.13, 0.23, 0.47, 0.85, 1.0), *chamazulene* (0.03, 0.23, 0.47, 0.85, 0.79, 0.90, 1.0), and values for 50 and 55% H<sub>3</sub>PO<sub>4</sub>, resp., are given for *Se*-guaiazulene (0.56, 0.59), *isoguaiazulene* (0.50, 0.72), and *lactarazulene* (0.02, 0.08). The chromatograms were developed with H<sub>2</sub>O or dry NH<sub>3</sub>. LVII. Identity of lindazulene with chamazulene. F. Sorm, V. Herout, and K. Talada. *Ibid.* 281-3; *Collection Czechoslov. Chem. Commun.* 19, 186-8 (1954) (in English). Identity of lindazulene (C<sub>14</sub>H<sub>14</sub>, 91°, 48, 7716g) with chamazulene (1,4-dimethyl-7-ethylazulene) was proved by mixed m.p.s. of the trinitrobenzene compds. and by comparison of visible and ultraviolet spectra. The partial synthesis of lindazulene (*Pharm. Bull. Japan* 1, 241 (1953)) is, at the same time, proof of the correct structure of chamazulene as proposed by Sorm, *et al.* (see 6th preceding abstr.). M. Hudlický.

SYKORA, V

Chemical Abstr.  
Vol. 48  
Apr. 10, 1954  
Analytical Chemistry

Identification of 2,4-dinitrophenylhydrazones of carbonyl compounds by paper chromatography. V. Sykora and M. Hudlický. *Atad. Véd. Práva. Chem. Lity 47, 1874-8 (1953).*—To identify carbonyl compds., the 2,4-dinitrophenylhydrazones are subjected to paper chromatography with petroleum as the stationary phase and 80% EtOH or 65% PrOH as the mobile phase. The  $R_f$  value for the dinitrophenylhydrazones of the carbonyl compds. in EtOH and PrOH are given:  $\text{CH}_3\text{O}$  0.6, 0.84;  $\text{AcH}$  0.66, —;  $\text{Me}_2\text{C}$  0.42, —;  $\text{iso-PrCHO}$  0.32, —;  $\text{MeEtCO}$  0.31, 0.70; cyclopentanone 0.29, 0.67; cyclohexanone, 0.23, —; 2,2-dimethylcyclohexanone, 0.15, —; camphorone, 0.13, 0.49 resp.

SYKORA, V.

SYKORA, V.; HEROUT, V.; FLIVA, J.; SORM, F.

Terpenes. Part 50. Contribution to the constitution of elemol [in English with summary in Russian]. Sbor. Chekh. khim. rab. 19 no.1:124-134 F '54.  
(MLRA 7:6)

1. Department of Natural Products, Institute of Organic Chemistry,  
Czechoslovak Academy of Science, Prague. (Elemol)

CZECH

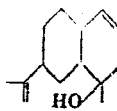
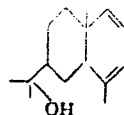
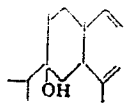
Vodňanský, L.V. Synthesis of elcamane (1-methyl-1-ethyl-2,4-dialkylcyclohexane). Vladimír Šékora, JIH  
Cerý, Vlastimil Herout, and František Šorm (Czech.  
Acad. Sci., Prague). Collection Czechoslov. Chem. Com-  
muns. 19, 563-6 (1954) (in English).—See C.A. 49, 1855i.  
E. J. C.

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MA 24



**Terpenes. LV. Synthesis of elemene (1-methyl-1-ethyl-2,4-diisopropyl cyclohexane).** Vladimír Škora, Jiří Černý, Vlastimil Herout, and František Šorm (Ces. akad. věd, Prague, Czech.). *Chem. Listy* 48, 78-81 (1954); cf. preceding abstr. Synthetic 1-methyl-1-ethyl-2,4-diisopropyl-cyclohexane (I) is identical with elemene, a reduction product of elemol. However, 1,5-diisopropyl-2-methyl-2-ethyl-cyclohexanol (II) is not identical with tetrahydroelemol. One of the three formulas is suggested for elemol.



To a suspension of dry MeONa (prepd. from 23 g. Na) in 200 ml.  $C_6H_6$  was added 75 g.  $HCO_2Et$  in 200 ml.  $C_6H_6$ , and to the ice-cooled mixt. was added a soln. of 51.5 g. carvomenthone ( $b_p$  94-4.5°,  $n_D^{20}$  1.4543) in 300 ml.  $C_6H_6$ . After 48 hrs. at room temp. under N atm., the mixt. was decompd. with  $H_2O$ , the  $C_6H_6$  layer repeatedly extd. with 7% NaOH, the alk. ext. was extd. with  $Et_2O$ , then acidified with HCl (1:1) to pH 6, and extd. again with  $Et_2O$  to give 47 g. (83%) 2-methyl-5-isopropyl-6-formylcyclohexanone (formyl-carvomenthone) (III),  $b_p$  122-2.5°. Etherification of III

(47 g.) with 38 g. iso-BuOH yielded 49 g. (80%) 2-methyl-5-isopropyl-6-(isobutoxymethylene)cyclohexanone (IV),  $b_p$  112-16°. To ethylate IV,  $KNH_2$ , prepd. from 16 g. K in 160 ml. liq.  $NH_3$  with 0.1 g.  $Fe(NO_3)_3$ , was added to 500 ml. boiling  $Et_2O$ , the  $NH_3$  was driven off under N atm., 44.7 g. IV in 200 ml.  $Et_2O$  was added during 2 hrs. after 1.5 hrs. boiling, in the course of 2 hrs., 90 g.  $EtI$  in 150 ml.  $Et_2O$  was added, and the mixt. refluxed 12 hrs., treated with  $H_2O$ , the aq. layer extd. with  $Et_2O$ , the ext. washed with 5% KOH,  $H_2O$ , dried, the  $Et_2O$  evapd., and the residue mixed with 250 ml.  $M$  methanolic  $FeCl_3$ . Treating the Fe complex with 400 ml. HCl (1:1), extg. the mixt. with  $Et_2O$ , washing the ext. with dil. HCl and  $H_2O$ , extg. the ether soln. repeatedly with 5% KOH, and steam distg. the alk. soln. yielded 17.5 g. (51.2%) 2-methyl-2-ethyl-5-isopropylcyclohexanone (V), pure,  $b_p$  113-3.5° (15.5 g.); semicarbazone, m. 111.5-12.5° (from aq. MeOH). Adding 1.82 g. V to a soln. of iso-PrLi (prepd. from 0.7 g. Li and 10 ml. iso-PrCN), and heating the mixt. 1.5 hrs. gave 2.1 g. 1,5-diisopropyl-2-methyl-2-ethylcyclohexanol (VI),  $b_p$  141-5°. Dehydration of 1.5 g. VI by heating 40 min. on the steam bath with fivefold excess of 80%  $HCO_2H$ , chromatography, and hydrogenation of the petr. ether fraction (0.9 g.,  $b_p$  112-13°) over  $PtO_2$  gave 1-methyl-1-ethyl-2,4-diisopropylcyclohexane (VII),  $d_4^{20}$  0.8480,  $n_D^{20}$  1.4638. Infrared spectra of VII and of elemene obtained by total reduction of elemol are identical.

M. Hudlický

✓ Rate of carbon disulfide evaporation from aqueous and oil solutions. Bohumil Souček and Vladimír Šýkora (Ústav hyg. práce, Prague). Pracovní Lékařství 10:22-24 (1955).  
 Evapn. of CS<sub>2</sub> from aq. solns. at 37° showed a half-time of 2.31 hrs., compared with 15.14 hrs. when evapg. from oil solns. This supports the assumption that the slow elimination of CS<sub>2</sub> from the organism is caused mainly by the slow gradual transfer of CS<sub>2</sub> from the fatty tissues to the blood, whereas the transfer from blood to the alveolar air and breath is much faster.  
 L. J. Uchacek

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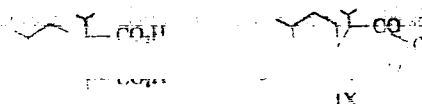
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Constitution of scorone. V. scorone, V. Hector, J. Chemistry

44-38861-1000



by an absorption band at 1714 cm.<sup>-1</sup>. This indicated that the C atom common to the 6- and 8-membered rings is

rearrangement

References. LXVI. The structure of  $\beta$ -carotene. I.  
Sikors, V. Herout, and P. Sorn (Czech. Akad. Veda 011

SYKORA, V.

Determining the absolute configuration of organic substances by means of optical rotations.

p. 400 (Chemie, Vol. 9, no. 3, June 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 2,  
February 1958

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and  
Their Synthetic Analogues.

G-3

Abs Jour : RZhKhim., No 10, 1958, No 32585

Author : Vladimir Sykora, Miroslav Romanuk

Inst : Not given

Title : Terpenes. LXXVIII. Lactone Rule of Hudson-Klyne and Its  
Application to Chemistry of Terpenes.

Orig Pub : Chem. listy, 1957, 51, No 2, 326-329; Sb. chekhosl. khim.  
rabot, 1957, 22, No 6, 1909-1913

Abstract : The rule of Hudson-Klyne (see Hudson G.S., J. Amer.  
Chem. Soc., 1910, 32, 338; RZhKhim., 1955, 28774) was applied  
to the determination of the configuration of lactones based  
on their optical mol. rotation. Easily accessible diols pro-  
duced from terpene lactones by reduction with  $\text{LiAlH}_4$ , cor-  
responding oxides and hydrocarbons with the same framework  
as the initial lactones are suggested as substances to com-  
pare with. It was found that the configuration of santanol-  
ide-5, 12 a (MD +63°, melting point 150 to 151°),

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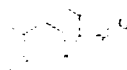
10/27/1994

**7月20日 星期四**

Distr: 4E3d

Terpenes LXXXII Constitution of acorone Methoni

$\text{C}_{10}\text{H}_{18}\text{O}_2$ , isolated from sweet-flag oil (II), is shown to be 1-isopropyl-4,7-dimethylpyrrolizidine-2,6-dione (III). Iso-



Distg. 10 kg. I in a column of 40 theoretical plates gave 760 g. of a fraction, b. 140–70°, which on diln. with petr. ether yielded 58 g. isocourene (m. 97–8° (petr. ether) (lit.<sup>10</sup>



[illegible]

James L. & R. M. Macmillan Harport.

over Pd on  $\text{SrCO}_3$  and fractionation yielded 4.3 g. ketone  $\text{C}_{17}\text{H}_{30}\text{O}$  (IX), *b.p.* 73–8° (immersed), *lit.*, *b.p.* 152–4° (70% EtOH), and 2 g. of ketone  $\text{C}_{17}\text{H}_{30}\text{O}$  (X), *b.p.* 97–102° (immersed), *lit.*, *b.p.* 172–9° (100% EtOH). Reduction of IX and X with  $\text{LiAlH}_4$  gave *b.p.* 119–5° and 118–13° which on fractionation yielded 1.5 g. of 1-octadecanol and 1.5 g. of 1-hydroxy-1-octadecane, *b.p.* 119–20° (100% EtOH), *lit.*, *b.p.* 119–20° (100% EtOH). Oxidation of IX with  $\text{KMnO}_4$  in  $\text{H}_2\text{O}$  and  $\text{NaOH}$ , XII, *d<sub>n</sub>* 0.8523, *n<sub>D</sub>* 1.4880, *lit.*, *d<sub>n</sub>* 0.8523. Similar treatment of X with  $\text{LiAlH}_4$  and  $\alpha\text{-C}_6\text{H}_5\text{CO}_2\text{H}$  at 230–5° gave *iso-octadecanoic acid*, *b.p.* 110–18°, dehydrogenated with S at 110–250° to 1,7-dimethyl-1-octadecyloctadecene, *lit.*, 59–57°, *petr.*, *m.* 88–7°. Adding 2.3 g. 4-methylcyclohexanone in petr. ether to a soln. of iso-BuLi, prepd. from 1.9 g. Li and .8 ml. iso-BuCl, refluxing the mixt. 1 hr., and decompg. with ice gave 2.85 g. 4-methyl-1-octadecyloctadecene (XIII), *b.p.* 90–101°. Heating 2.62 g. XIII with 15 ml. 85%  $\text{HCO}_2\text{H}$  1 hr. at 100° and chromatographing gave 2.05 g. of an olefin, *b.p.* 64–6°, which on dehydrogenation with S at 200–350° in a sealed tube and chromatography afforded XII, *b.p.* 114–6°, *d<sub>n</sub>* 0.8520, *n<sub>D</sub>* 1.4883. The infrared spectra of XI and XII are given. LXXXIII.

Constitution of laurpliptene. Miroslav Holub, Vlastimil Herout, and Frantisek Sorm. *Ibid.* 1713–24; cf. C.A. 49, 12401d; 48, 12707j.—Reduction of laurpliptene (I) with  $\text{LiAlH}_4$  gave 4-hydroxylaural (II) which, treated with 66%  $\text{HI}$ , hydrogenated over 5% Pd or  $\text{SrCO}_3$ , and dehydrogenated with S at 180–220°, gave 1,7-dimethyl-1-octadecyloctadecene, *m.p.* 60° (petr. ether); *pinene*, *m.p.* 52° (EtOH); *stygolene*, *m.* 124°. I treated with 5%  $\text{COH}$  in  $\text{MeOH}$  1 hr. at room temp. gave 7% octadecyl alcohol ( $\text{C}_{18}\text{H}_{38}\text{O}$  (III), *m.p.* 100°  $\text{AcOH}$ ), and a small amt. of the mono-unsaturated ester,  $\text{C}_{18}\text{H}_{34}\text{O}_2$  (III), *m.p.* 48°. Oxidation of I with  $\text{H}_2\text{O}_2$  gave  $\text{HCO}_2\text{H}$ . III treated with  $\text{CrO}_3/\text{Et}$  in *oxane* and pyridine and the mixt. refluxed with 1%  $\text{HCl}$  3 min. gave mono-*O*-carbethyloxylaural  $\text{C}_{18}\text{H}_{36}\text{O}_3$ , *m.p.* 144° ( $\text{Me}_2\text{CO}$ ). Oxidation of IV

*Vladimir S. Zakharenko, Vladimir M. Kozlov*

with  $\text{CrO}_3$  in pyridine 24 hrs. at  $30^\circ$  gave the mono- $\alpha$ -carbethoxy- $\alpha$ -diketone,  $\text{C}_{11}\text{H}_{16}\text{O}_7$ , m.  $93-4^\circ$  (from  $\text{Et}_2\text{O}$ -petr. ether). III with  $\text{CrO}_3$  in pyridine 24 hrs. at room temp. yielded a diketone, *laserone* (V),  $\text{C}_{10}\text{H}_{14}\text{O}_4$ , m.  $180-1^\circ$  (AcO-Et). I in pyridine with  $\text{SOCl}_2$  gave an unsatd. hydroxyoxodiester  $\text{C}_{10}\text{H}_{14}\text{O}_4$  (VI), m.  $110^\circ$ , hydrogenated over  $\text{PtO}_2$  to a satd. hydroxyoxo diester,  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (VII), b.p.  $151-65^\circ$ . Reduction of VI with  $\text{LiAlH}_4$  in  $\text{Et}_2\text{O}$  gave an unsatd. triol,  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (VIII), m.  $177^\circ$  (AcOEt); that of VII gave a satd. triol  $\text{C}_{10}\text{H}_{18}\text{O}_4$ , m.  $185-7^\circ$  (AcOEt), obtained also by hydrogenation of VIII over  $\text{PtO}_2$ . Tetrahydrocyclopentadiene (IX) with  $\text{SOCl}_2$  in pyridine gave an unsatd. hydroxyoxo diester,  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (X), b.p.  $137-42^\circ$ , reduced with  $\text{LiAlH}_4$  to VIII. Heating I with  $\text{SOCl}_2$  and pyridine 10 min. at  $80^\circ$ , yielded an unsatd. oxo diester  $\text{C}_{10}\text{H}_{14}\text{O}_4$  (XI), b.p.  $183-5^\circ$ , hydrogenated over  $\text{PtO}_2$  to a completely satd. oxo diester,  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (XII), b.p.  $147-51^\circ$ . Reduction of XI with  $\text{LiAlH}_4$  gave an unsatd. triol,  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (XIII), m.  $171-2^\circ$  (AcOEt), hydrogenated over  $\text{PtO}_2$  to a satd. triol,  $\text{C}_{10}\text{H}_{18}\text{O}_4$  (XIV), m.  $162^\circ$  (AcOEt). Its stereoisomer (XIV'), was prepd. by reduction of XII with  $\text{LiAlH}_4$ , m.  $212-13^\circ$  (AcOEt). Heating IX with  $\text{SOCl}_2$  in pyridine 10 min. at  $80^\circ$  gave an unsatd. oxo diester,  $\text{C}_{10}\text{H}_{14}\text{O}_4$  (XV), m.  $75^\circ$  (aq. EtOH), reduced with  $\text{LiAlH}_4$  to XIII. XIII with  $\text{CrO}_3$  in AcOH at  $5^\circ$  yielded a lactone carboxylic acid  $\text{C}_{10}\text{H}_{16}\text{O}_4$  (XV), m.  $123-4^\circ$  (petr. ether); *Me ester*, m.  $79-80^\circ$ . XIII with  $\text{CrO}_3$  in AcOH at  $20^\circ$  and esterification with  $\text{CH}_3\text{N}$ , gave an oxo dicarboxylic di-Me ester,  $\text{C}_{10}\text{H}_{18}\text{O}_4$  (XVII). From the oxidation of IX with  $\text{CrO}_3$  in AcOH was obtained a small amt. of a mixed ester,  $\text{C}_{10}\text{H}_{16}\text{O}_4$ , m.  $139-40^\circ$  (from  $\text{Et}_2\text{O}$ ), of III with angelic acid and AcOH. Infrared spectra of V, VI, XI, X, and XV are given.

M. Hudikoff

4/1/6

Country : CZECHOSLOVAKIA G  
 Category : Organic Chemistry. Natural Substances and  
 Their Synthetic Analogs  
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15499  
 Author : Sykora, V.; Herout, V.; Pliva, J.; Sorm, F.  
 Institut. : -  
 Title : Terpenes. LXXXII. Structure of Acoron  
 Orig Pub. : Collect. czechosl. chem. commun., 1958, 23,  
 No 6, 1072-1082  
 Abstract : No abstract.  
 See Ref Zhur-Khim, 1958, 64585.

Card: 1/1

G - 78

SYKORA, V.

COUNTRY	: Czechoslovakia	G-3
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 16 1959, No.	57216
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	: of IV followed by oxidation with dil HNO <sub>3</sub> to D(+)-isopropylsuccinic acid (V). I does not isomerize when refluxed for 45 min with 10% NaOH in alcohol. When (-)-cadinanedihydrochloride is heated with CH <sub>3</sub> COONa in CH <sub>3</sub> COOH followed by chromatography on alkaline Al <sub>2</sub> O <sub>3</sub> followed by fractionation in a column with 70 theoretical plates packed with Diksone [sic], IV is obtained, bp 124°/9 mm, n <sub>D</sub> <sup>20</sup> 1.5059, d <sub>4</sub> <sup>20</sup> 0.9239. 9.5 gms IV are added over 2 hrs to	

CARD: 2/6

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COUNTRY	: Czechoslovakia	G-3
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 16 1959, No.	57216
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	: yields of V are obtained by the ozonation of 7.8 gms IV in 80 ml $\text{CH}_3\text{COOH}$ and the decomposition of the ozonides at $100^\circ$ with a mixture of 45 ml water and 2.2 ml 30% $\text{H}_2\text{O}_2$ . The residue after the evaporation of the solution is oxidized (1 hr, $110-120^\circ$ ) with 50% $\text{HNO}_3$ and $\text{V}_2\text{O}_5$ ; after the usual treatment, 2.03 gms of the anhydride of V are obtained which on heating with water give V (yield 18%); the latter is purified by paper chromatography. The reaction dispersion	

CARD: 5/6

COUNTRY	: Czechoslovakia	0-3
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 16 1959, No.	57215
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	: which on chromatography on $Al_2O_3$ (4% water) yields 1,1,5-trimethyl-3-isopropyl-3-indanol, bp 125-128° (bath temperature)/3 mm. 700 mg of the latter product are hydrogenated over Pt (from $PtO_2$ ) in glacial $CH_3COOH$ ; following chromatography on $Al_2O_3$ and percolation on $SiO_2$ , I is obtained, bp 112-120°/17 mm, $n_D^{20}$ 1.4694, $d_4^{20}$ 0.8644.- Application of an analogous procedure to iso- $C_4H_7Li$ (from 1.4 gm Li and 12 ml iso- $C_4H_7Cl$ ) and 1.75 gm of 1,5-dimethyl-3-indanone	

CARD: 2/6

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CZECH/8-52-11-13/30

AUTHORS: Sýkora, V., Herout, V., Reiser, A. and Šorm, F.  
 TITLE: On Terpenes (O terpenech) XCVI. Steric Configuration of Acorone and its Stereoisomers (XCVI. Sterická stavba akoronu a jeho stereoisomerů)  
 PERIODICAL: Chemické Listy, 1958, Vol 52, Nr 11, pp 2102 - 2109 (Czechoslovakia)  
 ABSTRACT: The connection between acorone, iso acorone, neoacorone and the probable basic form of their molecules has been determined on the basis of optical rotation difference, dispersion rotation curves, dipole moments and the thermodynamic stability of the above named diketones and their derivatives. Evidence was given in previous reports (Refs 1,2) that acorone possesses structure I. Structure I represents 16 membered stereoisomeric substances. If we consider that the compounds differ only in the configuration of the asymmetric centres neighbouring on the carbonyl groups (C<sub>(4)</sub> and C<sub>(7)</sub>), four stereoisomers are possible. Three of these are known and have already been described and their I.R. spectra are given in this paper together with their

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CZECH/8-52-11-13/30

On Terpenes XCVI. Steric Configuration of Acorone and Its  
Stereoisomers

There are 3 figures, 6 tables and 12 references, 3 of  
which are Czech, 8 English and 1 French

ASSOCIATION: Oddělení přírodních látek, Chemický ústav,  
Československá akademie věd, Praha  
(Division of Natural Products, Institute of Chemistry,  
Czechoslovakian Ac.Sc., Prague)

SUBMITTED: April 30, 1958

Card 3/3

0,008/60/000/04/013/019  
E142/E435

60th Birthday of Dr Václav Hovorka, Professor, Engineer

their capacity for forming salts, the structure of the salts and their use in analytical chemistry. In conjunction with Z.Holzbecher and S.L.Diviš, Professor Hovorka also carried out detailed investigations in micro-analysis. At present he is devoting much of his time to the study of iso-structural isometallic chelates. Professor Hovorka has also translated many scientific publications, especially from Russian and English, and has published a "Russian-Czech Chemical and Technical Dictionary". A list of titles of his original works, books and translations is given in an appendix listing 69 papers, 2 books, 4 Czech translations of Russian books and Czech translation of an English book.

Card 2/2

SZKORA, V; DUBSKI, F. [Dubsky, E]

Selective ion exchangers on the basis of resorcyaldehyde. Part I :  
Resins from resorcyclideanthranilic acid. Coll Cz Chem 27 no.2:350-  
354 F '62.

1. Kafedra analiticheskoykhimii, Khimiko-tekhnologicheski institut,  
Praga.

CZECHOSLOVAKIA

SYKORA, V; DUBSKY, F.

Institute of Analytic Chemistry of the Technical Higher  
School of Chemistry, Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications,  
Vol 8, 1963, pp 2149-2157

"Selective Ion Exchange on the Base of Resorcyaldehyde  
II. Dynamic Appraisal and Analytic Use of Resin  
of Resorcytidenanthranic Acid."

KREPINSKY, J.; SYKORA, V. [deceased]; ZVONKOVA, E.; HEROUT, V.

On terpenes. Pt.172. Coll Cz Chem 30 no.2:553-558 F '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. Submitted December 29, 1963. 2. Present address: Moskovskiy institut tonkoy khimicheskoy tekhnologii M.V.Lomonosova, Moscow (for Zvorkova).

SYKORA, Vlasia

"Pneumatization of the bony nasal septum of man", p. 119 (Yugoslavia. Vol. 1, 1951, Zagreb)

SO: Monthly List of East European Vol. 2, No 9  
Russian Accessions, Library of Congress, September 1953, Uncl.

SYKORA, VLASTA

PODVINEC, Srećko; SYKORA, Vlasta

Pathophysiological mechanism of the corrosive lesions in the esophagus. Radovi Med. fak. Vol.2:209-212 1953.

1. Otorinolaringoloska klinika Medicinskog fakulteta u Zagrebu  
(Predstojnik: akademik prof. dr. B.Gusic). (Priljeno 29.I.1953)  
(ESOPHAGUS, stenosis

\*corrosive lesions, pathophysiol.)

SYKORA, Vlasta

Author's therapy of chronic postocorrosive stenoses of the esophagus in children, Radovi Med. fak. Vol.2:231-235 1953.

1. Otorinolaringoloska klinika Medicinskog fakulteta u Zagrebu  
(Predstojnik akademik prof. dr. B.Gusic). (Priljeno 29.I.1953)  
(ESOPHAGUS, stenosis  
\*caustic, in child., ther.)



MEDKOVA, L.; RUMLER, A.; SYKOROVA, D.

Relation of squint to disorders of occlusion and phonation.  
Cesk. oftal. 20 no.1:52-56      Ja'64.

1. Očni oddeleni polikliniky OUNZ, (ved. lékař MUDr. L. Medkova) ;  
Foniatricke poradna krajske nemocnice s poliklinikou v  
Ostrave (vedouci: MUDr. A. Rumler) a Detske zubni oddeleni  
polikliniky OUNZ v Karvine (vedouci: MUDr. D. Sykova).

SYKOROVA, D.; STRZONDALOVA, H.; KERNKA, J.

Experiences in the analysis of causes of low dental caries incidence in children from children's homes in the district of Karvinna. Cesk. stomat. 65 no.3:220-227 My'65.

1. Detske zubni stredisko nemocnice s poliklinikou v Karvine;  
Oddeleni hygieny vyzivy Obvodniho ustavu narodniho zdravi v  
Karvine.

28604 Z/047/61/000/011/004/OC4  
D007/D102

1.1800

18.1200

AUTHOR: Sýkorová, Věra, Engineer

TITLE: Surface treatment helps save nonferrous metals

PERIODICAL: Technická práce, no. 11, 1961, 958-961

TEXT: This is a presentation of some recent achievements of the Státní výzkumný ústav ochrany materiálu (State Research Institute for Material Protection) in its research and developmental work on surface-treatment methods by which nonferrous metals can be saved. An improved diffusion-chromizing method (inchromizing), protected by a Czechoslovak patent, uses Cr powder which is transformed into gaseous iodide at temperatures above 1,000°C so as to react with and diffuse into the Fe surface. Disintegration products of this process condensate on the cool equipment parts and spontaneously regenerate to the original chromizing mixture. This method is only applicable to low-carbon steels containing up to 0.08% C, or steels stabilized with Ti (type 12020), Nb, or similar carbide-forming elements. This method is used by the Jihomoravská armaturka Hodonín (South-Moravian Fittings Plant in

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28604 Z/047/61/000/011/004/004  
D007/D102

Surface treatment helps ...

Hodonín) for impregnation of waterline fittings and saves 17027.6 stainless steel and 40 - 65% of production costs. A large line for diffusion-chromizing of screws, nuts, etc., is to be installed at the Šroubárny - Libčice (Screw Plant in Libčice). Diffusion sulfurizing processes (including the patented Czechoslovak gaseous sulfonitriding process) are still seldom used in the CSSR. Upon order, diffusion sulfurizing is made by the n. p. Spojené ocelárny - Kladno (United Steelworks, National Enterprise, in Kladno), and is successfully used by the ČZM in Strakonice and Prague and by the Cs. závody naftových motorů (Czechoslovak Diesel-Engine Works) in Prague for impregnation of piston rings, and by the TOS Concern for impregnation of worm gears, lead screws, bushings, etc. High-quality, nearly pore-free coatings are obtained by currentless Ni plating. Coating with acid-resistant enamels, mostly used for chemical and foodhandling equipment, is in the CSSR applied only by the n. p. Buzuluk (Buzuluk National Enterprise) in Komárov and the Chotebořské kovodělné závody, n. p. (Chotěboř Metal-Processing Works, National Enterprise) in Chotěboř. The latter plant has an enameling furnace measuring 4 x 4 x 9 m. Several Czechoslovak research institutes have been investigating the possibilities of saving nonferrous metals in the production

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Surface treatment helps ...

28604  
Z/047/61/000/011/004/004  
DOC7/D102

of friction bearings. The State Research Institute for Metal Protection developed two methods by which the bushings are galvanically lined with bronze which has the same properties as the metallurgically prepared CuSn6 alloy. Galvanical coating with an additional SnPb lining increases the bearing capacity from 150 to 400 kg/cm<sup>2</sup>. The metallizing process for producing linings of friction surfaces is very popular in the USSR. Spraying-on of metal layers not only saves nonferrous metals but the properties of these linings are also superior to those of classic bearing metals; their porosity (up to 15% of the layer volume) helps to maintain the lubricant film. A certain disadvantage is the impaired thermal conductivity which is due to the oxide content of the lining. For linings of friction surfaces applied with flame-spray guns, the State Research Institute for Material Protection recommends the following pseudo-alloys: (1) Al + PbSb<sub>3</sub> in a volume ratio of 1 : 1 has very good anti-friction properties, especially at high circumferential speeds. At hydrodynamic friction, this pseudo-alloy behaves like the XSN 42 3751 composition. It withstands semi-dry and dry friction at loads up to 50 kg and circumferential speeds of 6 - 11 m/sec, and gives a reliable performance even at uncontrolled lubrication at loads up to 200 kg, temperatures up to

X

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28604  
Z/047/61/000/011/004/004  
D007/D102

Surface treatment helps ...

120°C and circumferential speeds of 2 - 6 m/sec, (2) Al + PbSb<sub>3</sub> in a volume ratio of 3 : 1 withstands loads up to 200 kg/cm<sup>2</sup> at circumferential speeds of 2 - 7 m/sec at controlled lubrication, and loads up to 300 kg/cm<sup>2</sup> at a circumferential speed of 2 m/sec even with substandard lubrication with solid lubricants. (3) Fe 0.1C + Al in a volume ratio of 1 : 1 withstands high loads (up to 500 kg/cm<sup>2</sup>) at small circumferential speeds (up to 2 m/sec) even with substandard lubrication with solid lubricants. At circumferential speeds of 6 - 10 m/sec, it withstands specific pressures up to 100 kg/cm<sup>2</sup> at temperatures up to 300°C. This pseudo-alloy is especially suitable for lining the bearings of forming machines. The Smeralovy závody (Smeral Works) in Brno are projecting the construction of a large shop for metal-spraying of friction linings. All these methods have been worked out in all details, complete with technological instructions and general information on the nature and properties of the surface obtained by each particular process. There are 1 figure and 1 table.

ASSOCIATION: Státní výzkumný ústav ochrany materiálu, Praha (State Research Institute for Material Protection, Prague)

Card 4/4

24286

Z/032/61/011/008/005/009  
EO73/E535

11800

AUTHORS: Sýkorová, V., Dvořák, J., Průšek, J. and Vychytil, P.

TITLE: Continuous anodic oxidation of aluminium conductors

PERIODICAL: Strojírenství, 1961, Vol.11, No.8, p.634

TEXT: A technology of continuous oxidation of aluminium conductors was developed in which a superimposed current is applied at a current density of about 150 A/dm<sup>2</sup>. Within 15 sec an oxide layer about 8 μ thick forms which fully satisfies electrical requirements. The use of the extremely high current densities was made possible by feeding in the current through a liquid and using a special cooling system. The quality of the oxide layer is monitored by an automatic unit. A three-pole optical and sound signalling system gives information to the attending personnel on the state of the process. The oxide layers can withstand temperatures up to 300°C so that they form an insulation of the highest thermal class. In contrast to organic insulating materials, these layers also have a high resistance to high energy radiation in atomic reactors, accelerators etc. The breakdown

Card 1/2

Continuous anodic oxidation ...

24286

Z/032/61/011/008/005/009

E073/E535

X

voltage of an 8  $\mu$  layer is about 200 V r.m.s. and can be doubled by impregnation. The thus insulated conductors can be wound by conventional methods with a minimum curvature of eight times the wire diameter. These aluminium conductors enable increasing the thermal class of the windings and reducing the total weight of electrical machinery; pilot plant manufacture of these conductors has commenced.

1960, Prague: SVÚOM 45/60

[Abstractor's Note: Complete translation.]

Card 2/2



JELINEK, Tomas, inz.; SYKOROVA, Viera, inz.

Work of thematic voluntary groups in the solution of research and development tasks, and utilization of the result of their work in anticorrosion protection. Tech praca 15 no. 6: 412-415 Je '63.

1. Dom techniky, Bratislava (for Jelinek)
2. Statni vyzkumny ustav ochrany materialu, Praha (for Sykороva)

SYKOROVA, Vera, inz.

Present difficulties and further development of anticorrosion protection. Podn org 18 no.9:411-415 S '64.

1. G.V. Akimov State Research Institute of Material Protection, Prague.

JELINEK, Tomasz, inz.; SYKOROWA, Wiera, inz.

Works of Czechoslovak groups collectively working on subjects  
in the field of protection against corrosion. Przegl techn  
84 no.28:5 14 JI '63.

L 45587-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6028714

SOURCE CODE: UR/0185/66/011/008/0917/0918

AUTHOR: Bohdanovych, A. S.; Ivzhenko, M. A.; Koval'ov, V. K.; Sykors'kyi, Yu. A.; Yurachkivs'kyi, P. O.; Bryhynets', V. P.

ORG: Kiev Polytechnical Institute (Kyivskiy politekhnichnyy instytut)

TITLE: Dislocations and V-centers in KCl crystals

SOURCE: Ukrayins'kyi fizychnyy zhurnal, v. 11, no. 8, 1966, 917-918

TOPIC TAGS: potassium chloride, crystal lattice dislocation, x-ray coloring, color center, crystal absorption spectrum

ABSTRACT: This article endeavors to explain the role of dislocations in creating V-centers in KCl crystals subjected to x-rays at room temperatures. Four crystals of "pure" KCl grown from a melt by the Kyropoulos method (two each with dislocation density of  $5 \cdot 10^6$  and  $5 \cdot 10^4 \text{ cm}^{-2}$ ) were colored by x-rays at room temperature and their absorption spectra were then photospectrometrically measured. Comparison of graphs plotted from the results of "hard" and "soft" coloring showed that (1), other coloring conditions being equal, the crystals with more dislocations chiefly formed  $V_3$ -centers ( $218 \text{ m}\mu$ ), while those with fewer dislocations gave only  $V_2$ -centers ( $230 \text{ m}\mu$ ), and (2) the spectral makeup of V-absorption does not

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ACC NR: AP6028714

depend on "hardness" of crystal coloration, not only refuting the view that "hard" and "soft" x-rays create  $V_3$ - and  $V_2$ -centers, respectively, but also suggesting that  $V_3$ -centers are defects formed either in or near the dislocations themselves, while  $V_2$ -centers form in the lattice far from them and require lattice vacancies. Further studies showed that the preceding assumption is true and that the  $V_2$ - to  $V_3$ -center ratio is stipulated by dislocation density and the number of "frozen" thermal vacancies in the crystal. In conclusion the authors thank Prof. M. P. Kalabukhov for interest in the work and useful discussions. Orig. art. has: 2 figures. [26]

SUB CODE: 20/ SUBM DATE: 05Mar66/ ORIG REF: 002/ OTH REF: 007 / ATD PRESS: 5082

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*pla*

EYBL, V.; SYKOVA, J.; KOCHER, Z.

EDTA and cobalt poisoning. Cesk. fysiол. 8 no.4:331-332 July 59.

1. Farmakologicky ustav lek. fak. KU, Plzen.  
(EDATHAMIL, pharmacol.) (COBALT, toxicol.)

SYKOVA, L. V.

M. N. Tilitchenko and L. V. Sykova

"Chemical Structure of Cyclohexanone-Formaldehyde Resins." Journal of Applied Chemistry 25, 64-69, January 1952, Tchernishavskiy University, Laboratory for Organic Chemistry.

ABSTRACT AVAILABLE

D-50054

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USSR / Meadow Cultivation.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24759

Author : Sykoyan, A. P.  
Inst : Armenian Scientific-Research Institute of  
Animal Husbandry and Veterinary Science  
Title : Action of Certain Forms of Potassium  
Fertilizers on Natural Meadows of the  
Meadow-and-Steppe Zone in the Armenian SSR

Orig Pub : Tr. Arm. n.-i. in-ta zhivotnovodstva i  
veterinariii, 1957, 2, 245-255

Abstract : In the high-mountainous Lori plain on  
many-grassed meadows mixed with narrow-  
leaved feather-grass and on cereal meadows  
mixed with sedges, K in the form of K<sub>60</sub>P<sub>60</sub>  
was introduced at the rate of 45 kg/ha. On  
the many-grassed meadow, the hay-harvest .

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133-8-24/28

An increase of productivity and an improvement in the operation of continuous heating furnaces. (Cont.)

pressure. Moreover, the design of burners (Figs.1 and 2) was altered, namely screw shaped inserts (Fig.4) were introduced into the tubes of the burners, which considerably improved gas-air mixing. The distribution of heat along the top of the furnace before and after the redesign of burners is shown in Fig.3. The leakage of cold air through the delivery door was decreased by the use of a flame curtain (22 water cooled tubes along the width of the furnace - Fig.2). By the above measures the temperature of the heated metal was increased by 20-30 C. The output of a single furnace increased to: for hot charge - 80 ton/hr, for cold charge - 50 ton/hr. There are 4 figures.

ASSOCIATION: Zaporozh'ye Steel Works (Zavod "Zaporozhstal").

AVAILABLE: Library of Congress

Card 2/2

COUNTRY	:	Poland	H-17
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 5 1960, No.	19070
AUTHOR	:	Kalinowski, K. and Sykulska, Z.	
INST.	:	Not given	
TITLE	:	The Coulometric Microdetermination of Thiamine Hydrochloride (Aneurine)	
ORIG. PUB.	:	Acta Polon Pharmac, 16, No 2, 111-114 (1959)	
ABSTRACT	:	<p>The microdetermination of vitamin B<sub>1</sub> has been carried out in alkaline medium using iodine obtained by electrolytic means. The sharp [deadstop] endpoint method with two platinum electrodes was used in the determination.</p> <p style="text-align: right;">From authors' summary</p>	

CARD: 1/1

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SYKULSKA, Zofia; GORYCKA, Maria

Stability of injectable solutions of morphine hydrochloride  
sealed under inert gas. Acta Pol. pharm. 22 no.2:133-139 '65.

1. Z Katedry Farmacji Stosowanej Akademii Medycznej w Lodzi  
(Kierownik: prof. dr. F. Modrzejewski).

Country : POLAND  
Category: Organic Chemistry. Natural Compounds and Their  
Synthetic Analogues

G

Abs Jour: RZhKhim., No 17, 1959, No. 61058

Author : Sylulski, J.

Inst :

Title : Study of Eupatorium Cannabinum. Part V. Study  
of Euparin and Derivation of Accompanying  
Compounds

Orig Pub: Acta polon. pharmac., 1958, 15, No 5, 361-370

Abstract: The content of euparin (2-isopropenyl-5-acetyl-  
-6-oxycumaron (I) in the roots of Eupatorium Cann-  
abinum, growing in Poland, varies from 0.09 to  
0.34%, with the maximum content occurring at the

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